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WHAT IS CLAIMED IS:

1. A filter circuit comprising:

a complex block which realizes a complex zero of a transfer function;

a real/pure imaginary block which realizes a real zero of a transfer function and a pure imaginary zero of the transfer function; and

a single path circuit which couples the complex block with the real/pure imaginary block through a single-path.

2. The filter circuit according to claim 1,

wherein the complex block comprises: a first end resonator; a first resonator that is coupled to the first end resonator; a second resonator that is coupled to the first resonator; a third resonator that is coupled to the second resonator; a fourth resonator that is coupled to the third resonator; and a second end resonator that is coupled to the fourth resonator; and

a coupling between the first end resonator and the second end resonator, a coupling between the first resonator and the fourth resonator, and a coupling between the second resonator and the third resonator are in phase.

3. The filter circuit according to claim 1,

wherein the real/pure imaginary block comprises: a third

end resonator; a fifth resonator that is coupled to the third end resonator; a sixth resonator that is coupled to the fifth resonator; a seventh resonator that is coupled to the sixth resonator; an eighth resonator that is coupled to the seventh resonator; and a fourth end resonator that is coupled to the eighth resonator; and

among a coupling between the third end resonator and the fourth end resonator, a coupling between the fifth resonator and the eighth resonator, and a coupling between the sixth resonator and the seventh resonator, one set of adjacent ones is in phase.

4. The filter circuit according to claim 1,

wherein the real/pure imaginary block comprises: a third end resonator; a fifth resonator that is coupled to the third end resonator; a sixth resonator that is coupled to the fifth resonator; a seventh resonator that is coupled to the sixth resonator; an eighth resonator that is coupled to the seventh resonator; and a fourth end resonator that is coupled to the eighth resonator, and;

among a coupling between the third end resonator and the fourth end resonator, a coupling between the fifth resonator and the eighth resonator, and a coupling between the sixth resonator and the seventh resonator, all sets of adjacent ones are in anti-phase.

5. The filter circuit according to claim 1, further comprising: a second complex block which realizes a complex zero of a transfer function;

6. The filter circuit according to claim 2, wherein the coupling between the first end resonator and the first resonator is larger than the coupling between the fourth resonator and the second end resonator.

7. A filter circuit comprising:

a complex block which realizes a complex zero of a transfer function;

a real block which realizes a real zero of a transfer function; and

a single path circuit which couples the complex block with the real block through a single-path.

8. The filter circuit according to claim 7, wherein the real block comprises: a third end resonator; a fifth resonator that is coupled to the third end resonator; a sixth resonator that is coupled to the fifth resonator; and a fourth end resonator that is coupled to the sixth resonator; and

a coupling between the third end resonator and the fourth end resonator, and a coupling between the fifth resonator and

the sixth resonator are in phase.

9. The filter circuit according to claim 7, further comprising: a pure imaginary block which realizes a pure imaginary zero of a transfer function

10. The filter circuit according to claim 9, further comprising: a second single path circuit which couples the complex block with the pure imaginary block through a single-path.

11. A filter circuit comprising:

a complex block which realizes a complex zero of a transfer function;

a pure imaginary block which realizes a pure imaginary zero of a transfer function; and

a single path circuit which couples the complex block with the pure imaginary block through a single-path.

12. The filter circuit according to claim 11,

wherein the pure imaginary block comprises: a third end resonator; a fifth resonator that is coupled to the third end resonator; a sixth resonator that is coupled to the fifth resonator; and a fourth end resonator that is coupled to the sixth resonator; and

a coupling between the third end resonator and the fourth end resonator, and a coupling between the fifth resonator and the sixth resonator are in anti-phase.

13. The filter circuit according to claim 11, further comprising: a real block which realizes a real zero of a transfer function.

14. The filter circuit according to claim 13, further comprising: a second single path circuit which couples the real block with the pure imaginary block through a single-path.

15. A filter circuit comprising:

a first complex block which realizes a complex zero of a transfer function;

a second complex block which realizes a complex zero of a transfer function; and

a single path circuit which couples the first complex block with the second complex block through a single-path.

16. The filter circuit according to claim 15,

wherein the first complex block comprises: a first end resonator; a first resonator that is coupled to the first end resonator; a second resonator that is coupled to the first resonator; a third resonator that is coupled to the second

resonator; a fourth resonator that is coupled to the third resonator; and a second end resonator that is coupled to the fourth resonator; and

a coupling between the first end resonator and the second end resonator, a coupling between the first resonator and the fourth resonator, and a coupling between the second resonator and the third resonator are in phase.

17. The filter circuit according to claim 15,

wherein the second complex block comprises: a fifth end resonator; a seventh resonator that is coupled to the fifth end resonator; an eighth resonator that is coupled to the seventh resonator; a ninth resonator that is coupled to the eighth resonator; a tenth resonator that is coupled to the ninth resonator; and a sixth end resonator that is coupled to the tenth resonator; and

a coupling between the fifth end resonator and the sixth end resonator, a coupling between the seventh resonator and the tenth resonator, and a coupling between the eight resonator and the ninth resonator are in phase.

18. A filter circuit having a pass amplitude characteristic with a predetermined pass band, comprising:

a first circuit which realizes attenuation poles on both sides of the predetermined pass band in the pass amplitude

characteristic; and

a second circuit which realizes a flat group delay characteristic in the pass band;

wherein the first circuit and the second circuit are coupled with a single path;

the second circuit comprises: a first end resonator; a first resonator that is coupled to the first end resonator; a second resonator that is coupled to the first resonator; a third resonator that is coupled to the second resonator; a fourth resonator that is coupled to the third resonator; and a second end resonator that is coupled to the fourth resonator; and

a coupling between the first end resonator and the second end resonator, a coupling between the first resonator and the fourth resonator, and a coupling between the second resonator and the third resonator are in phase.

19. The filter circuit according to claim 18,

wherein the first circuit comprises: a third end resonator; a fifth resonator that is coupled to the third end resonator; a sixth resonator that is coupled to the fifth resonator; a seventh resonator that is coupled to the sixth resonator; an eighth resonator that is coupled to the seventh resonator; and a fourth end resonator that is coupled to the eighth resonator; and

among a coupling between the third end resonator and

the fourth end resonator, a coupling between the fifth resonator and the eighth resonator, and a coupling between the sixth resonator and the seventh resonator, one set of adjacent ones is in phase.

20. The filter circuit according to claim 18,

wherein the first circuit comprises: a third end resonator; a fifth resonator that is coupled to the third end resonator; a sixth resonator that is coupled to the fifth resonator; a seventh resonator that is coupled to the sixth resonator; an eighth resonator that is coupled to the seventh resonator; and a fourth end resonator that is coupled to the eighth resonator, and;

among a coupling between the third end resonator and the fourth end resonator, a coupling between the fifth resonator and the eighth resonator, and a coupling between the sixth resonator and the seventh resonator, one set of adjacent ones is in anti-phase.

21. The filter circuit according to claim 18,

wherein the first circuit comprises: a third end resonator; a fifth resonator that is coupled to the third end resonator; a sixth resonator that is coupled to the fifth resonator; and a fourth end resonator that is coupled to the sixth resonator; and

a coupling between the third end resonator and the fourth end resonator, and a coupling between the fifth resonator and the sixth resonator are in anti-phase.

22. The filter circuit according to claim 18,

wherein the first circuit and the second circuit include a plurality of resonators; and

at least one of the plurality of resonators is formed by a supercoductor.